

THAT WHICH IS CLAIMED IS:

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1. A bicycle stem for connecting a bicycle handlebar to a bicycle steering tube, the bicycle stem comprising:

5 a body portion having opposing first and second ends;

a handlebar clamping portion connected to the first end of said body portion;

10 a steering tube clamping portion connected to the second end of said body portion and having a tubular shape defining a steering tube receiving passageway therethrough, said steering tube clamping portion also having a clamp receiving passageway therein transverse to the steering tube receiving passageway and in communication therewith;

15 a steering tube clamp in the clamp receiving passageway and comprising

20 a pair of cooperating clamp members aligned in side-by-side relation and comprising respective portions defining an imaginary cylinder and a recess therein for the steering tube, each clamp member also having at least one fastener receiving passageway therein offset a predetermined distance from an axis defined by the imaginary cylinder, and

25 at least one fastener extending between corresponding fastener receiving passageways of said pair of clamp members for urging said clamp members together to engage the steering tube and thereby secure the bicycle stem to
30 the steering tube.

2. A bicycle stem according to Claim 1 wherein said fastener receiving passageways are offset the predetermined distance from the axis of the imaginary cylinder in a direction away from the recess.

3. A bicycle stem according to Claim 1 wherein said body portion, handlebar clamping portion and steering tube clamping portion are integrally formed as a monolithic unit.

4. A bicycle stem according to Claim 1 wherein said at least one fastener comprises a plurality of fasteners.

5. A bicycle stem according to Claim 4 wherein said plurality of fasteners comprises first and second bolts, each having an enlarged head and a threaded shaft extending outwardly therefrom.

6. A bicycle stem according to Claim 5 wherein said first and second bolts extend in opposite directions.

7. A bicycle stem according to Claim 1 wherein said at least one fastener comprises a single fastener.

8. A bicycle stem according to Claim 1 wherein said fastener receiving passageways are also canted at a predetermined angle from parallel to the axis of the imaginary cylinder.

9. A bicycle stem according to Claim 8 wherein the predetermined angle is in a range of about one-half to five degrees.

10. A bicycle stem according to Claim 1 wherein the recess for the steering tube extends for greater than a predetermined angle.

11. A bicycle stem according to Claim 10 wherein the recess for the steering tube extends for greater than about 90 degrees.

12. A bicycle stem according to Claim 1 wherein said pair of clamp members each have a same shape.

13. A bicycle stem according to Claim 1 wherein each clamp member comprises an end having a circular shape.

14. A bicycle stem according to Claim 1 wherein each clamp member comprises an end having a truncated circular shape.

15. A bicycle stem according to Claim 1 further comprising a handlebar clamping member cooperating with said handlebar clamping portion to clamp the bicycle handlebar therebetween.

16. A bicycle stem according to Claim 1 wherein a first clamp member is integrally formed with a side wall portion of said steering tube clamping portion, and wherein a second clamp member is movable
5 relative to the first clamp member.

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17. A bicycle stem for connecting a bicycle handlebar to a bicycle steering tube, the bicycle stem comprising:

5 a body portion having opposing first and second ends;

a handlebar clamping portion connected to the first end of said body portion;

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10 a steering tube clamping portion connected to the second end of said body portion and having a tubular shape defining a steering tube receiving passageway therethrough, said steering tube clamping portion also having a clamp receiving passageway therein transverse to the steering tube receiving passageway and in communication therewith;

15 a steering tube clamp in the clamp receiving passageway and comprising

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20 a pair of cooperating clamp members aligned in side-by-side relation and comprising respective portions defining an imaginary cylinder and a recess therein for the steering tube, each clamp member also having at least one fastener receiving passageway therein offset a predetermined distance from an axis defined by the
25 imaginary cylinder in a direction away from the recess, and

30 at least one fastener extending between corresponding fastener receiving passageways of said pair of clamp members for urging said clamp members together to engage the steering tube and thereby secure the bicycle stem to the steering tube;

35 said body portion, handlebar clamping portion and steering tube clamping portion being integrally formed as a monolithic unit.

18. A bicycle stem according to Claim 17 wherein said at least one fastener comprises a plurality of fasteners.

19. A bicycle stem according to Claim 17 wherein said fastener receiving passageways are also canted at a predetermined angle from parallel to the axis of the imaginary cylinder.

20. A bicycle stem according to Claim 17 wherein the recess for the steering tube extends for greater than a predetermined angle.

21. A bicycle stem according to Claim 17 wherein said pair of clamp members each have a same shape.

22. A bicycle stem according to Claim 17 further comprising a handlebar clamping member cooperating with said handlebar clamping portion to clamp the bicycle handlebar therebetween.

23. A bicycle stem according to Claim 17 wherein a first clamp member is integrally formed with a side wall portion of said steering tube clamping portion, and wherein a second clamp member is movable
5 relative to the first clamp member.

24. A bicycle stem for connecting a bicycle handlebar to a bicycle steering tube, the bicycle stem comprising:

5 a body portion having opposing first and second ends;

a handlebar clamping portion connected to the first end of said body portion;

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10 a steering tube clamping portion connected to the second end of said body portion and having a tubular shape defining a steering tube receiving passageway therethrough, said steering tube clamping portion also having a clamp receiving passageway therein transverse to the steering tube receiving passageway and in communication therewith;

15 a steering tube clamp in the clamp receiving passageway and comprising

20 a pair of cooperating clamp members aligned in side-by-side relation and comprising respective portions defining a recess therein for the steering tube, each clamp member having a plurality of fastener receiving passageways therein, and

25 a plurality of fasteners extending between corresponding fastener receiving passageways of said pair of clamp members for urging said clamp members together to engage the steering tube and thereby secure the bicycle stem to the steering tube.

25. A bicycle stem according to Claim 24 wherein said plurality of fasteners comprises first and second bolts, each having an enlarged head and a threaded shaft extending outwardly therefrom.

26. A bicycle stem according to Claim 25 wherein said first and second bolts extend in opposite directions.

27. A bicycle stem according to Claim 24 wherein said body portion, handlebar clamping portion and steering tube clamping portion are integrally formed as a monolithic unit.

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28. A bicycle stem according to Claim 24 wherein said clamp members also comprise portions defining an imaginary cylinder; and wherein the fastener receiving passageways are also canted at a
5 predetermined angle from parallel to an axis of the imaginary cylinder.

29. A bicycle stem according to Claim 24 wherein the recess for the steering tube extends for greater than a predetermined angle.

30. A bicycle stem according to Claim 24 wherein said pair of clamp members each have a same shape.

31. A bicycle stem according to Claim 24 further comprising a handlebar clamping member cooperating with said handlebar clamping portion to clamp the bicycle handlebar therebetween.

32. A bicycle stem according to Claim 24 wherein a first clamp member is integrally formed with a side wall portion of said steering tube clamping portion, and wherein a second clamp member is movable
5 relative to the first clamp member.

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33. A bicycle stem for connecting a bicycle handlebar to a bicycle steering tube, the bicycle stem comprising:

5 a body portion having opposing first and second ends;

a handlebar clamping portion connected to the first end of said body portion;

a steering tube clamping portion connected to the second end of said body portion and having a

10 tubular shape defining a steering tube receiving
passageway therethrough, said steering tube clamping
portion also having a clamp receiving passageway
therein transverse to the steering tube receiving
passageway and in communication therewith;

15 a steering tube clamp in the clamp receiving
passageway and comprising

20 a pair of cooperating clamp members
aligned in side-by-side relation and
comprising respective portions defining an
imaginary cylinder and a recess therein for
the steering tube, each clamp member also
having at least one fastener receiving
passageway therein canted at a predetermined
angle from parallel to an axis of the
25 imaginary cylinder, and

30 at least one fastener extending between
corresponding fastener receiving passageways
of said pair of clamp members for urging said
clamp members together to engage the steering
tube and thereby secure the bicycle stem to
the steering tube.

34. A bicycle stem according to Claim 33
wherein the predetermined angle is in a range of about
one-half to five degrees.

35. A bicycle stem according to Claim 33
wherein said body portion, handlebar clamping portion
and steering tube clamping portion are integrally
formed as a monolithic unit.

36. A bicycle stem according to Claim 33
wherein the recess for the steering tube extends for
greater than a predetermined angle.

37. A bicycle stem according to Claim 33 wherein said pair of clamp members each have a same shape.

38. A bicycle stem according to Claim 33 further comprising a handlebar clamping member cooperating with said handlebar clamping portion to clamp the bicycle handlebar therebetween.

39. A bicycle stem according to Claim 33 wherein a first clamp member is integrally formed with a side wall portion of said steering tube clamping portion, and wherein a second clamp member is movable
5 relative to the first clamp member.

40. A bicycle stem for connecting a bicycle handlebar to a bicycle steering tube, the bicycle stem comprising:

a body portion having opposing first and
5 second ends;

a handlebar clamping portion connected to the first end of said body portion;

a steering tube clamping portion connected to the second end of said body portion and having a
10 tubular shape defining a steering tube receiving passageway therethrough, said steering tube clamping portion also having a clamp receiving passageway therein transverse to the steering tube receiving passageway and in communication therewith;

15 a steering tube clamp in the clamp receiving passageway and comprising

a pair of cooperating clamp members aligned in side-by-side relation and comprising respective portions defining a
20 recess therein for the steering tube, the

recess extending for greater than about 90 degrees, and each clamp member having at least one fastener receiving passageway therein, and

25 at least one fastener extending between
corresponding fastener receiving passageways
of said pair of clamp members for urging said
clamp members together to engage the steering
tube and thereby secure the bicycle stem to
30 the steering tube.

41. A bicycle stem according to Claim 40 wherein the recess extends for greater than about 120 degrees.

42. A bicycle stem according to Claim 40 wherein the recess extends for greater than about 180 degrees.

43. A bicycle stem according to Claim 40 wherein said body portion, handlebar clamping portion and steering tube clamping portion are integrally formed as a monolithic unit.

44. A bicycle stem according to Claim 40 wherein said pair of clamp members each have a same shape.

45. A bicycle stem according to Claim 40 further comprising a handlebar clamping member cooperating with said handlebar clamping portion to clamp the bicycle handlebar therebetween.

46. A bicycle stem according to Claim 40 wherein a first clamp member is integrally formed with

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forming a body portion having opposing first
5 and second ends, a handlebar clamping portion connected
to the first end of the body portion, and a steering
tube clamping portion connected to the second end of
the body portion, the steering tube clamping portion
having a tubular shape defining a steering tube
10 receiving passageway therethrough and a clamp receiving
passageway therein transverse to the steering tube
receiving passageway and in communication therewith;

15 a pair of cooperating clamp members
aligned in side-by-side relation and
comprising respective portions defining an
imaginary cylinder and a recess therein for
the steering tube, each clamp member also
20 having at least one fastener receiving
passageway therein offset a predetermined
distance from an axis defined by the
imaginary cylinder, and

25 at least one fastener extending between
corresponding fastener receiving passageways
of the pair of clamp members for urging the
clamp members together to engage the steering
tube and thereby secure the bicycle stem to
the steering tube.

48. A method according to Claim 47 wherein the fastener receiving passageways are offset the predetermined distance from the axis of the imaginary cylinder in a direction away from the recess.

49. A method according to Claim 47 wherein the body portion, handlebar clamping portion and steering tube clamping portion are integrally formed as a monolithic unit.

50. A method according to Claim 47 wherein the at least one fastener comprises a plurality of fasteners.

51. A method according to Claim 47 wherein the fastener receiving passageways are also canted at a predetermined angle from parallel to the axis of the imaginary cylinder.

52. A method according to Claim 47 wherein the recess for the steering tube extends for greater than a predetermined angle.

53. A method according to Claim 47 wherein the pair of clamp members each have a same shape.

54. A method according to Claim 47 further comprising forming a handlebar clamping member to cooperate with the handlebar clamping portion to clamp the bicycle handlebar therebetween.

55. A method according to Claim 45 wherein forming the steering tube clamp comprises integrally forming a first clamp member with a side wall portion of the steering tube clamping portion.

56. A method for making a bicycle stem for connecting a bicycle handlebar to a bicycle steering tube, the method comprising:

forming a body portion having opposing first
5 and second ends, a handlebar clamping portion connected to the first end of the body portion, and a steering tube clamping portion connected to the second end of the body portion, the steering tube clamping portion having a tubular shape defining a steering tube
10 receiving passageway therethrough and a clamp receiving passageway therein transverse to the steering tube receiving passageway and in communication therewith;

forming a steering tube clamp for positioning in the clamp receiving passageway and comprising

15 a pair of cooperating clamp members aligned in side-by-side relation and comprising respective portions defining a recess therein for the steering tube, each clamp member having a plurality of fastener
20 receiving passageways therein, and

a plurality of fasteners extending between corresponding fastener receiving passageways of the pair of clamp members for urging the clamp members together to engage
25 the steering tube and thereby secure the bicycle stem to the steering tube.

57. A method according to Claim 56 wherein the plurality of fasteners comprises first and second bolts, each having an enlarged head and a threaded shaft extending outwardly therefrom.

58. A method according to Claim 57 wherein the first and second bolts extend in opposite directions.

59. A method according to Claim 56 wherein the body portion, handlebar clamping portion and steering tube clamping portion are integrally formed as a monolithic unit.

60. A method according to Claim 56 wherein the pair of clamp members each have a same shape.

61. A method according to Claim 56 further comprising forming a handlebar clamping member to cooperate with the handlebar clamping portion to clamp the bicycle handlebar therebetween.

62. A method according to Claim 56 wherein forming the steering tube clamp comprises integrally forming a first clamp member with a side wall portion of the steering tube clamping portion.

63. A method for making a bicycle stem for connecting a bicycle handlebar to a bicycle steering tube, the method comprising:

forming a body portion having opposing first
5 and second ends, a handlebar clamping portion connected
to the first end of the body portion, and a steering
tube clamping portion connected to the second end of
the body portion, the steering tube clamping portion
having a tubular shape defining a steering tube
10 receiving passageway therethrough and a clamp receiving
passageway therein transverse to the steering tube
receiving passageway and in communication therewith;

forming a steering tube clamp for positioning
in the clamp receiving passageway and comprising
15 a pair of cooperating clamp members
aligned in side-by-side relation and
comprising respective portions defining an
imaginary cylinder and a recess therein for
the steering tube, each clamp member also
20 having at least one fastener receiving
passageway therein canted at a predetermined
angle from parallel to an axis of the
imaginary cylinder, and
25 at least one fastener extending between
corresponding fastener receiving passageways
of the pair of clamp members for urging the
clamp members together to engage the steering
tube and thereby secure the bicycle stem to
the steering tube.

64. A method according to Claim 63 wherein
the predetermined angle is in a range of about one-half
to five degrees.

65. A method according to Claim 63 wherein
the body portion, handlebar clamping portion and
steering tube clamping portion are integrally formed as
a monolithic unit.

66. A method according to Claim 63 wherein
the recess for the steering tube extends for greater
than a predetermined angle.

67. A method according to Claim 63 wherein
the pair of clamp members each have a same shape.

68. A method according to Claim 63 further comprising forming a handlebar clamping member to cooperate with the handlebar clamping portion to clamp the bicycle handlebar therebetween.

69. A method according to Claim 63 wherein forming the steering tube clamp comprises integrally forming a first clamp member with a side wall portion of the steering tube clamping portion.

70. A method for making a bicycle stem for connecting a bicycle handlebar to a bicycle steering tube, the method comprising:

forming a body portion having opposing first
5 and second ends, a handlebar clamping portion connected to the first end of the body portion, and a steering tube clamping portion connected to the second end of the body portion, the steering tube clamping portion having a tubular shape defining a steering tube
10 receiving passageway therethrough and a clamp receiving passageway therein transverse to the steering tube receiving passageway and in communication therewith;

forming a steering tube clamp for positioning
in the clamp receiving passageway and comprising
15 a pair of cooperating clamp members aligned in side-by-side relation and comprising respective portions defining a recess therein for the steering tube, the recess extending for greater than about 90
20 degrees, and each clamp member having at least one fastener receiving passageway therein, and

at least one fastener extending between
corresponding fastener receiving passageways
25 of the pair of clamp members for urging the

clamp members together to engage the steering tube and thereby secure the bicycle stem to the steering tube.

71. A method according to Claim 70 wherein the recess extends for greater than about 120 degrees.

72. A method according to Claim 70 wherein the recess extends for greater than about 180 degrees.

73. A method according to Claim 70 wherein the body portion, handlebar clamping portion and steering tube clamping portion are integrally formed as a monolithic unit.

74. A method according to Claim 70 wherein the pair of clamp members each have a same shape.

75. A method according to Claim 70 further comprising forming a handlebar clamping member to cooperate with the handlebar clamping portion to clamp the bicycle handlebar therebetween.

76. A method according to Claim 70 wherein forming the steering tube clamp comprises integrally forming a first clamp member with a side wall portion of the steering tube clamping portion.